iv) contacting the tip with a cell in the cell layer at or near the interface; and

v) causing attachment of the cell to the tip.

3. A method according to claim 1 or 2 in which the liquid in which the cells are suspended is an extracellular physiological solution.

4. A method according to claim 1 or 2 in which the layer of cells is several cells deep and loosely packed.

5. A method according to claim 2 in which the layer of cells is formed by mounting the capillary tube in an essentially upright orientation and allowing the suspended cells to sediment to the downward end of the tube to collect there in a layer.

6. A method according to claim 2 in which the capillary tube is mounted essentially upright with the interface at a lower open end of the tube and the pipette is mounted essentially upright with the tip upwardly pointing.

7. A method according to claim 2 in which the capillary tube and pipette are concentrically mounted with the capillary tube in a fixed position and the pipette movable along the common axis.

8. A method according to claim 2 in which the capillary tube and pipette are concentrically mounted with the pipette in a fixed position and the capillary tube movable along the common axis.

9. A method according to claim 2 wherein gentle suction is applied to the pipette during contact with the interface and during the step of contacting the tip with a cell.

10. A method according to any of claims 2 to 9, in which contact between the pipette tip and the air/liquid interface and/or subsequent movement of the pipette tip into the liquid is detected by monitoring pipette capacitance.

11. A method according to any of claims 2 to 10, in which if no cell is contacted at or near the interface at or within a predetermined time after contact between the pipette and the interface, the pipette is withdrawn from the interface and then moved back to the interface to repeat the attempt to contact a cell.

12. An apparatus for carrying out the method of any preceding claim which is a computer controlled apparatus including the following elements:

i) a patch clamp amplifier;

ii) a source of variable suction for a patch clamp pipette under the control of the patch clamp amplifier;

iii) a holder for a capillary tube to be mounted vertically;

iv) a holder for a patch clamp pipette to be mounted vertically in the same axis as the capillary tube in an inverted orientation with the tip pointing upwardly;

v) a manipulator for controlling relative movement of a capillary tube and a pipette when each is mounted

respectively in its holder, the relative movement being along a common axis of movement under feedback control from the patch clamp amplifier and allowing for the tip of the pipette to enter a downwardly facing end of the capillary tube.

13. An apparatus according to claim 12 which includes an array of a multiplicity of capillary tubes and an array of a multiplicity of pipettes.

14. An apparatus according to claim 12 or 13, comprising a pipette capacitance sensor for sensing pipette capacitance as the pipette tip contacts an air/liquid interface at the end of the capillary tube and enters the liquid in the capillary tube during operation of the apparatus.

15. A computer-program-controlled patch clamping process for carrying out the method of any of claims 1 to 11.

16. A computer-program-controlled patch clamping process for controlling the apparatus of claim 12, 13 or 14.

17. A computer-readable medium carrying a computer program for controlling a computer to implement the method any of claims 1 to 11 or to control the apparatus of claim 12, 13 or 14.

18. A method for controlling a computer by means of a computer program for implementing the method of any of claims 1 to 11.

and an optimum temperature of operation may need to be determined. Since the invention relies on the formation of a liquid/air interface at which the cells are located, it may be necessary to optimise the osmolarity of the suspending liquid medium in order to achieve the optimum level of surface tension etc.